CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID : **CP-2017-09-25-10** **Date: 27-09-2017**

Customer : Assistant Executive Engineer, Dasarahalli Sub division, BBMP, Bangalore.

Address : Dasarahalli Sub division, BBMP, Bangalore.

Project Name : Construction of public sitting platform at Bagalagunte (near Maramma temple and Karekallu) in Bagalagunte Ward no.14 Dasarahalli Sub division.

Agency : Sri. Ramesh K S, #127, Havana Shree Nilaya, 3rd cross, M S Ramaiah layout, Bengaluru.

Customer's Reference : EE/DD/WO/31/2017-18

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 25-09-2017

Sample ID No : 2017-09-25-10/01

Sample Type : Birla Shakthi 53 grade

Reference to BIS codes : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,
IS 4031 (Part 1,2 3,4,5, 6,11):1988
IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4
IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5
IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6
IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5
IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5
IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6

Date of test : 26-09-2017

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	2.7	–
2	Finess by Air permeablity method (m^2/kg, Min)	266.9	225m^2/kg, Min
3	Density (gm/cc)	3.15	–
4	Standard Consistency (%)	27.5%	Not specified
5	Initial Setting time	180 minutes	Not less than 30 minutes
6	Final Setting time	290 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1mm	Not more than 10 mm

Note:

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R KARTHIK RECHAN
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Quality Manager

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CP/TF/01

TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2017-09-25-10** **Date: 24-10-2017**
Customer	:	Assistant Executive Engineer, Dasarahalli Sub division, BBMP, Bangalore.
Address	:	Dasarahalli Sub division, BBMP, Bangalore.
Project Name	:	Construction of public sitting platform at Bagalagunte (near Maramma temple and Karekallu) in Bagalagunte Ward no.14 Dasarahalli Sub division.
Agency	:	Sri. Ramesh K S, #127, Havana Shree Nilaya, 3rd cross, M S Ramaiah layout, Bengaluru.
Customer's Reference	:	EE/DD/WO/31/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	25-09-2017
Sample ID No	:	2017-09-25-10/01
Sample Type	:	Birla Shakthi 53 grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	26-09-2017

Compressive Strength

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	28.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.0N/mm^2	Not less than 37 N/mm^2
3	28 Days	59.5N/mm^2	Not less than 53 N/mm^2

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CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2017-09-25-10** **Date: 28-09-2017**
Customer	:	Assistant Executive Engineer, Dasarahalli Sub division, BBMP, Bangalore.
Address	:	Dasarahalli Sub division, BBMP, Bangalore.
Project Name	:	Construction of public sitting platform at Bagalagunte (near Maramma temple and Karekallu) in Bagalagunte Ward no.14
Agency	:	Sri. Ramesh K S, #127, Havana Shree Nilaya, 3rd cross, M S Ramaiah layout, Bengaluru.
Customer's Reference	:	EE/DD/WO/31/2017-18
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	25-09-2017
Sample ID No	:	2017-09-25-10/02(a)
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	25-09-2017

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	1223	1223	8.2	91.8	90-100
3	20 mm	5972	7195	48.0	52.0	30-70
4	10 mm	5575	12770	85.1	14.9	10-35
5	4.75 mm	1873	14643	97.6	2.4	0-5
6	Pan	357	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2017-09-25-10** **Date: 28-09-2017**

Sample ID No : 2017-09-25-10/02(a)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	13.8	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	12.1	
3	Specific Gravity	2.67	_
4	Bulk Density(Loose) (Kg/l)	1.48	_
5	Bulk Density(Compacted) (Kg/l)	1.51	_
6	Water Absorption(%)	0.23	_

Note:
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ಟಿ.ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2017-09-25-10** **Date: 28-09-2017**
Customer	:	Assistant Executive Engineer, Dasarahalli Sub division, BBMP, Bangalore.
Address	:	Dasarahalli Sub division, BBMP, Bangalore.
Project Name	:	Construction of public sitting platform at Bagalagunte (near Maramma temple and Karekallu) in Bagalagunte Ward no.14 Dasarahalli Sub division.
Agency	:	Sri. Ramesh K S, #127, Havana Shree Nilaya, 3rd cross, M S Ramaiah layout, Bengaluru.
Customer Reference	:	EE/DD/WO/31/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	25-09-2017
Sample ID No	:	2017-09-25-10/02(b)
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	25-09-2017

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	384	384	7.7	92.3	90-100
3	10 mm	2137	2521	50.4	49.6	25-55
4	4.75 mm	2228	4749	95.0	5.0	0-10
5	Pan	251	5000	100	0	–

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2017-09-25-10** **Date: 28-09-2017**

Sample ID No : 2017-09-25-10/02(b)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	12.5	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.7	
3	Specific Gravity	2.69	_
4	Bulk Density(Loose) (Kg/l)	1.49	_
5	Bulk Density(Compacted) (Kg/l)	1.52	_
6	Water Absorption(%)	0.26	_
7	Aggregate crushing Value(%)	22.7	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	21.9	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

Note:

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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2017-09-25-10** **Date: 28-09-2017**

Customer : Assistant Executive Engineer, Dasarahalli Sub division, BBMP, Bangalore.

Address : Dasarahalli Sub division, BBMP, Bangalore.

Project Name : Construction of public sitting platform at Bagalagunte (near Maramma temple and Karekallu) in Bagalagunte Ward no.14 Dasarahalli Sub division.

Agency : Sri. Ramesh K S, #127, Havana Shree Nilaya, 3rd cross, M S Ramaiah layout, Bengaluru.

Customer's Reference : EE/DD/WO/31/2017-18

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 25-09-2017

Sample ID No : 2017-09-25-10/03

Sample Type : Fine Aggregate

Reference to BIS codes : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1, 3) RA2012
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption

Date of test : 25-09-2017

Total weight taken : 1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	86	86	8.6	91.4	90-100	90-100	90-100	95-100
3	2.36 mm	135	221	22.1	77.9	60-95	75-100	85-100	95-100
4	1.18 mm	176	397	39.7	60.3	30-70	55-90	75-100	90-100
5	600 micron	186	583	58.3	41.7	15-34	35-59	60-79	80-100
6	300 micron	174	757	75.7	24.3	5-20	8-30	12-40	15-50
7	150 micron	156	913	91.3	8.7	0-10	0-10	0-10	0-15
8	Pan	87	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2017-09-25-10** **Date: 28-09-2017**

Sample ID No : 2017-09-25-10/03

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.85	–
2	Specific Gravity	2.59	–
3	Material finer than 75 micron(%)	6.2	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

Note:
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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2017-10-06-03** **Date: 10/10/2017**

Customer : Assistant Executive Engineer, Dasarahalli Sub division, BBMP, Bangalore.

Address : Dasarahalli Sub division, BBMP, Bangalore.

Project Name : Construction of public sitting platform at Bagalagunte (near Maramma temple and Karekallu) in Bagalagunte Ward no.14 Dasarahalli Sub division.

Agency : Sri. Ramesh K S, #127, Havana Shree Nilaya, 3rd cross, M S Ramaiah layout, Bengaluru.

Customer's Reference : EE/DD/WO/31/2017-18

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 06-10-2017

Sample ID No : 2017-10-06-03/01

Customer ID : PCC

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M25 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5

Date of test : 10/10/2017

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	PCC	M25	03/10/2017	10/10/2017	150.25 X 150.24 X 150.21	22574	8.377	435.7	19.3	19.7
2	PCC	M25	03/10/2017	10/10/2017	150.20 X 150.21 X 150.29	22562	8.375	446.7	19.8	
3	PCC	M25	03/10/2017	10/10/2017	150.28 X 150.26 X 150.30	22581	8.391	453.9	20.1	

Note:

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CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Date: 31/10/2017

Lab ID	:	**CP-2017-10-06-03**
Customer	:	Assistant Executive Engineer, Dasarahalli Sub division, BBMP, Bangalore.
Address	:	Dasarahalli Sub division, BBMP, Bangalore.
Project Name	:	Construction of public sitting platform at Bagalagunte (near Maramma temple and Karekallu) in Bagalagunte Ward no.14 Dasarahalli Sub division.
Agency	:	Sri. Ramesh K S, #127, Havana Shree Nilaya, 3rd cross, M S Ramaiah layout, Bengaluru.
Customer's Reference	:	EE/DD/WO/31/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	06-10-2017
Sample ID No	:	2017-10-06-03/02
Customer ID	:	PCC
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M25 / 28 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 Methods of Tests for Strength of Concrete Cl.5
Date of test	:	31/10/2017

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	PCC	M25	03/10/2017	31/10/2017	150.20 X 150.22 X 150.30	22563	8.365	638.5	28.3	28.3
2	PCC	M25	03/10/2017	31/10/2017	150.25 X 150.25 X 150.24	22575	8.353	629.8	27.9	
3	PCC	M25	03/10/2017	31/10/2017	150.25 X 150.38 X 150.30	22595	8.378	650.7	28.8	

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TEST RESULTS OF STEEL

Lab ID	:	**CP-2017-09-25-10** **Date: 27-09-2017**
Customer	:	Assistant Executive Engineer, Dasarahalli Sub division, BBMP, Bangalore.
Address	:	Dasarahalli Sub division, BBMP, Bangalore.
Project Name	:	Construction of public sitting platform at Bagalagunte (near Maramma temple and Karekallu) in Bagalagunte Ward no.14 Dasarahalli Sub division.
Agency	:	Sri. Ramesh K S, #127, Havana Shree Nilaya, 3rd cross, M S Ramaiah layout, Bengaluru.
Customer's Reference	:	EE/DD/WO/31/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	25-09-2017
Sample ID No	:	2017-09-25-10/04
Sample Type	:	JSW
Reference to BIS codes	:	IS 1786-2008, IS:1608-2005(RA 2011), IS 1599-2012.
Date of test:	:	26-09-2017

Sl.No	Identification of sample	Grade of the sample	Diameter of the steel bar	Weight of the sample	Yield stress	Tensile strength	Elongation	Bend test	Rebend test
			(mm)	(kg/m)	(N/mm2)	(N/mm2)	(%)		
1	JSW	Fe500	12	0.887	560	692	20.0%	Satisfactory	Satisfactory
2	JSW	Fe500	16	1.582	575	695	19.5%	Satisfactory	Satisfactory

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